

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,
and listings, of claims in the application:

LISTING OF CLAIMS:

1-13. (canceled)

14. (currently amended) Cage drying-compacting apparatus for wastes, comprising:

a cylindrical body and at least a pair of pressure plates[,];

a peripheral wall of said cylindrical body consisting being comprised of heating longitudinal tubes, eoured by carrying a thermal carrier fluid, provided along the generatrices a generatrix of the cylinder and spaced from each other, in such a way to realise to provide longitudinal slots for outlet of vapour vapor but not for outlet of material, wherein steam generated by heating the wastes is discharged through the longitudinal slots between said heating tubes, said tubes being retained by plural retaining rings spaced from each other along a length of said tubes; coupled by constraint hinge means, positioned at a given distance between centres, and

said pressure plates being placed opposed to each other, operating as movable basis of said cylindrical body and acting as pressing pistons[,];

~~steam generated by the heating step of said wastes being discharged through the longitudinal slots between said heating tubes, characterised in that it provides~~

further heat sources, provided inside the cage drying-compacting apparatus, all along its length, said further heat sources being comprised of at least one tube through which the thermal carrier fluid runs; through,

means for inlet of the material to be subjected to treatment, in a position close to one of the two ends of the apparatus[[],]; and

means for collecting the material subjected to the treatment, in correspondence of the opposed end.

15. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that wherein~~ said further heat sources comprise a plurality of tubes ~~coursed by carrying~~ the thermal carrier fluid and placed aligned, spaced each other, in such a way to divide the inner volume of the cylindrical body into sections connected to each other, [[for]] each said section being provided with a pair of opposed pressure plates, shaped on the basis of the shape of each the respective said section.

16. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that wherein~~ said further heat sources comprise a plurality of tubes ~~coursed by carrying~~ the thermal carrier fluid and placed aligned, spaced from each other, to allow the passage of the material to be subjected to

treatment, in such a way to divide the inner volume of the cylindrical body into four equivalent sections connected to each other, each said section being provided with a pair of opposed pressure plates, shaped on the basis of the shape of each the respective said section.

17. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that~~ wherein said pressure plates are shaped in such a way that the profile faced toward the outer surface of the cage has a straddle profile, ~~in such a way that~~ with cusps ~~defined between a straddle and the adjacent one are insinuate within the space~~ corresponding to the spaces between two adjacent said tubes.

18. (canceled)

19. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that~~ wherein said further heat sources are constrained by a containment structure, comprised of a plurality of constraint plates[[],] provided at a set distance from each other between centres.

20. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that it provides further comprising~~ inlet and outlet manifolds for said thermal carrier fluid from the tubes, coupled by flexible joints, in such a way to allow a uniform distribution of the fluid within the tubes.

21. (currently amended) Drying-compacting apparatus according to claim 20, ~~characterised in that~~ wherein said inlet

and outlet manifolds ~~for said thermal carrier fluid~~ are provided in such a way that ~~[[the]]~~ a flow direction within each single tube is of said tubes is opposite a flow direction in a directly adjacent one of said tubes opposed to the one of the adjacent tube.

22. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that wherein~~ said means for inlet of the material to be subjected to treatment comprise a loading hopper, from which refuses fall within a loading chamber at the inlet end of the cylindrical body.

23. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that it further comprises further comprising~~ a thermo-insulating material case, tightly containing said cylindrical body, having a manifold function for the ~~vapour vapor~~ exiting from said longitudinal slots and ~~put in~~ a depression mode by a closed cycle motor-condensing unit ~~in such a way that said apparatus has no impact on the working environment and on the outer environment.~~

24. (currently amended) Drying-compacting apparatus according to claim 14, ~~characterised in that said retainerhoops wherein said plural retaining rings~~ are mounted on a series of resting and sliding means ~~for reducing creating a labile statically indeterminable structure in order to minimise the effects due to stresses deriving from the high thermal gradients,~~

as well from the radial thrusts due to the compression forces exerted by the opposed pressure plates.

25. (currently amended) Process of compacting and drying wastes by a drying-compacting apparatus as defined in claim 14, characterised in that, a set running, includes comprising the following steps, that are cyclically repeated:

- withdrawing the pressure plates of both sides of the apparatus up to the respective said two lower death ends of the apparatus;

- introducing within the drying-compacting apparatus, at the operative temperature, already containing an amount of refuses left from a previous cycle introduced during the previous cycles, a set loading amount of material to be subjected to treatment,

- operating the pressure plates of the material inlet side, in such a way that they press the introduced material with the new charge against the material already present within the cylindrical body of the drying-compacting apparatus, thrusting it in such a way that a fraction of the material, at the end opposite with respect to the inlet one of the material is made to exit exiting,

- withdrawing the pressure plates from the side of inlet of the material up to the respective one of said two ends of the apparatus lower death end,

- taking the amount of material exited from the apparatus,

- operating the pressure plates of both the apparatus sides, in such a way that they will press the material therein,
- repeating the cycle ~~of the first step.~~

26. (currently amended) Process of compacting and drying wastes according to claim 25 ~~24~~, ~~characterised in that set running operation conditions are reached by comprising the~~ following steps, starting from an empty apparatus:

- making the thermal carrier fluid flowing within the tubes, to reach the operative temperatures,
- withdrawing the pressure plates of both sides of the apparatus ~~up to the relevant lower death points,~~
- introducing a batch of the waste to be subjected to the treatment within the drying-compacting apparatus, that is at the operative temperature, and
- operating the pressure plates of both the sides of the apparatus, in such a way that they press and move the material contained therein,
said steps being cyclically repeated until reaching the set filling grade.